

REMARKS

The Examiner is thanked for the careful review of the application as set forth in the outstanding office action. Reconsideration of the application in view of the foregoing amendments and the following discussion is respectfully requested.

Claim 36 has been amended to provide proper antecedent support for "chamber" opening.

Allowable Subject Matter

Claims 31-35 have been allowed.

Claims 3, 4, 15, 16 and 20 stand objected to as depending from a rejected base claim, but are indicated as allowable if rewritten in independent form. These claims have been rewritten in independent form, and are in condition for allowance. Claim 20 has been rewritten to include features of Claims 13, 17-19.

Claims Rejections - 35 USC 102

Claims 1, 2, 5-7, 12-14, 17-19, 22, 23, 30, 36 and 37 stand rejected as being unpatentable over McFarland. This rejection is respectfully traversed on the grounds that a prima facie case of anticipation has not been established, and the reference does not describe element of these rejected claims.

Claim 1 is drawn to a pump which comprises:

a rigid substrate having a chamber opening defined therein;
an elastomeric diaphragm and sealing structure fabricated of an elastomeric material, said diaphragm and sealing structure overmolded over at least a portion of the rigid substrate and including at least one diaphragm portion extending over said chamber opening and defining a pump chamber, and a seal portion for making a seal between the elastomeric diaphragm and sealing structure and a mating part.

McFarland does not disclose each feature of Claim 1, including the limitation "a rigid substrate having a chamber opening defined therein."

The Examiner states that "McFarland discloses an over-molded diaphragm pump (20) comprising a rigid substrate (54) having a chamber opening (defined by interior of 32) defined therein." Applicants disagree with this interpretation of the reference. First, element 54 is disclosed as a fabric sheet, at 2:63-65, and is not described as a rigid substrate, let alone a rigid substrate having a chamber opening defined therein. Element 56 is described as a liner member which is relatively thin or sheet-like, and also does not have a chamber opening defined therein. The chamber opening referred to in the rejection, i.e. "defined by interior of 32" is not an opening formed in element 54.

Because McFarland does not describe a rigid substrate as recited in Claim 1, it also does not describe "an elastomeric diaphragm and sealing structure fabricated of an elastomeric material, said diaphragm and sealing structure overmolded over at least a portion of the rigid substrate and including at least one diaphragm portion extending over said chamber opening" as further recited in Claim 1.

The rejection under Section 102 of Claim 1 as well as the rejected claims depending therefrom, Claims 2, 5, 6, 7 and 12 , should be withdrawn.

Similar considerations apply to Claims 13 and 36, and the rejected claims depending therefrom, Claims 14, 17-19, 21-23, 25, 27, 30 and 37.

Applicants respectfully submit that the rejection under Section 102 should be withdrawn.

Claims Rejections - 35 USC 103

Claims 8-11, 24-26, 28 and 29 stand rejected as being unpatentable over Barinaga et al. ("Barinaga") in view of McFarland. This rejection is respectfully traversed on the grounds that a prima facie case of obviousness has not been established, and the applied references do not teach or suggest the claimed invention.

It is noted that the office action at paragraphs 15 and 16 refer to "Wallace" and not to Barinaga. Applicants believe this to be a typographical error, and will treat these paragraphs as referring to Barinaga.

The examiner asserts that Barinaga discloses a rigid substrate 44 having a chamber opening defined therein. Element 44 is a crimp cap, which mechanically holds the diaphragm 36 in compression with the chassis 34 to form a seal, Barinaga at 4:15.

The Examiner apparently admits that Barinaga does not disclose an over-molded diaphragm pump. However, the Examiner asserts that McFarland discloses such an arrangement in order to substantially preclude leakage through the assembly (1:62-63), and that it would have been obvious to modify "Wallace" (read as Barinaga) in order to substantially preclude leakage through the assembly. Applicants respectfully disagree.

There is no teaching or suggestion as how Barinaga would be modified by teachings of McFarland to arrive at the claimed invention, and the Examiner has not provided such an explanation. Moreover, McFarland does not teach an over-molded diaphragm pump arrangement, for the reasons discussed above regarding the rejection under Section 102. For these reasons, a prima facie case of obviousness has not been established, and the rejection of Claims 8-11, 24-26, 28 and 29 should be withdrawn.

CONCLUSION

The outstanding rejections have been addressed, and the application is in condition for allowance. Such favorable reconsideration is solicited.

Respectfully submitted,



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